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July 14, 2004

CERTIFICATE OF MAILING 37 C.F.R. 1.8

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July 14, 2004

Date

Michael C. Barrett

Michael C. Barrett

MS AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RE: *U.S. Patent Application No. 10/806,049 entitled "GRAVITY TECHNIQUES FOR DRILLING AND LOGGING" – Mark E. Ander*
Our reference: ANMA:001US

Sir:

Enclosed for filing in the above-referenced patent application is an Information Disclosure Statement, Form PTO-1449, and references A1-A13, B1 and C1-C57.

No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to the enclosed materials, the Commissioner is authorized to deduct the appropriate fees from Fulbright & Jaworski Deposit Account No.: 50-1212/ANMA:001US.

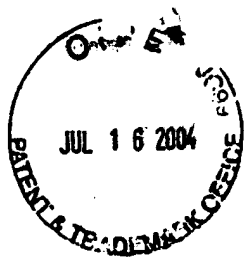
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Respectfully submitted,

Michael C. Barrett

Michael C. Barrett
Reg. No. 44,523

MCB/kmv
Encl.: as noted



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Mark E. Ander

Serial No.: 10/806,049

Filed: March 22, 2004

For: GRAVITY TECHNIQUES FOR
DRILLING AND LOGGING

Group Art Unit: 2856

Examiner: Unknown

Atty. Dkt. No.: ANMA:001US

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INFORMATION DISCLOSURE STATEMENT

MS AMENDMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

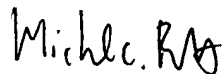
In accordance with 37 C.F.R §§ 1.97(g), (h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be

an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is authorized to deduct the appropriate fees from Fulbright & Jaworski Deposit Account No.: 50-1212/ANMA:001US.

Applicant respectfully requests that the listed documents be made of record in the present case.

Respectfully submitted,



Michael C. Barrett
Reg. No. 44,523
Attorney for Applicant

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Date: July 14, 2004

Form PTO-1449 (modified)

Atty. Docket No.

ANMA:001US

Serial No.

10/806,049

U.S. Department of Patents and Publications for Applicant's

Applicant

Mark E. Ander

INFORMATION DISCLOSURE STATEMENT

Filing Date:

March 22, 2004

Group:

2856

(Use several sheets if necessary)

U.S. Patent Documents

See Page 1

Foreign Patent Documents

See Page 1

Other Art

See Page 1

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A1	4,040,189	8/09/77	LaCoste	33	304	9/22/76
	A2	4,457,077	7/03/84	Lautzenhiser	33	304	7/05/83
	A3	4,457,168	7/03/84	Lautzenhiser and Wirtz	73	382R	3/10/83
	A4	4,475,386	10/09/84	Fitch and Lyle	73	151	6/06/83
	A5	4,803,479	2/07/89	Graebner <i>et al.</i>	340	854.1	10/21/87
	A6	4,517,836	5/21/85	Lyle, Jr. and Luke	73	152.06	10/25/83
	A7	4,581,932	4/15/86	Lautzenhiser and Nektut	73	382G	12/20/84
	A8	4,602,508	7/29/86	Fitch and Lyle, Jr.	73	382G	10/04/84
	A9	4,625,547	12/02/86	Lyle, Jr.	73	152.05	12/23/85
	A10	5,218,864	6/15/93	Pennybaker	73	152.05	12/10/91
	A11	5,448,912	9/12/95	Black	73	152.02	4/29/94
	A12	5,821,413	10/13/98	Chapin	73	152.05	4/10/97
	A13	5,970,787	10/26/99	Wignall	73	152.54	10/29/97

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	WO 96/10759	4/11/96	PCT			English

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Adams, "Gas saturation monitoring in North Oman Reservoir using a borehole gravimeter," <i>SPE Middle East Oil Show</i> , in Bahrain, Nov. 16-19, 1991.

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EXAMINER:

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EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. ANMA:001US	Serial No. 10/806,049
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Mark E. Ander	
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U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>	

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Exam. Init.	Ref. Des.	Citation
	C2	Alixant <i>et al.</i> , "First monitoring well in the rabi filed: design and data gathering," <i>Society of Petroleum Engineers</i> , SPE 28399, 1994.
	C3	Alixant <i>et al.</i> , "In-situ residual oil saturation to gas from time-lapse borehole gravity," <i>Society of Petroleum Engineers</i> , SPE 30609, 1995.
	C4	Ander and Chapin, "Borehole gravimetry: a review," <i>Society of Exploration Geophysics 67th Annual International Meeting Expanded Abstracts</i> , Dallas, GM 3.1, 531-534, Nov. 2-7, 1997.
	C5	Ander and Chapin, "Borehole microgal gravimetry: instruments, observations, and applications," <i>Abstracts of the American Geophysical Union Chapman Conference on Microgravimetry: Instrumentation, Observations and Applications</i> , Flagler College, St. Augustine, FL, March 3-6, 1997.
	C6	Ander and Summers, "The deep penetration density logging tool," <i>Transactions of the 16th European Formation Evaluation Symposium, Society of Professional Well Log Analysts</i> , Aberdeen, Scotland, October, 1994.
	C7	Ander, "Borehole gravity applications and market potential," <i>Ander Laboratory</i> , 2003.
	C8	Ander <i>et al.</i> , "Deep penetration density: a new borehole gravity meter," <i>Society of Exploration Geophysics 69th Annual International Meeting Expanded Abstracts</i> , Houston, 1999.
	C9	Ander <i>et al.</i> , "LaCoste & Romberg gravity meter: system analysis and instrumental errors," <i>Geophysics</i> , 64:1708-1719, 1999.
	C10	Ander and Summers, "LaCoste & Romberg gravity meter: tares, drift and temporal mass variation," <i>Society of Exploration Geophysics 67th Annual International Meeting Expanded Abstracts</i> , Dallas, GM 1.8, 498-501, Nov. 2-7, 1997.
	C11	Beyer, "Borehole gravity program of the U.S. Geological Survey (1963-1975)—brief history and basic data," <i>USGS Open File Report</i> , 80-903, July, 12, 1980.
	C12	Black <i>et al.</i> , "A digital borehole gravity logging system," <i>Second International Symposium on Borehole Geophysics for Minerals, Geotechnical, and Ground Water Application</i> , October, 6-8, 1987.
	C13	Bradley, "The application of the borehole gravimeter to the evaluation and exploration of oil and gas reserves," <i>Society of Exploration Geophysicists, 45th Annual International Meeting Expanded Abstracts</i> , Denver.

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Exam. Init.	Ref. Des.	Citation
	C14	Bradley, "The commercial application and interpretation of the borehole gravimeter," AMOCO Production Company, Report.
	C15	Caton, "Improved methods for reducing borehole-gravity data—application sand analyses of reduced gravity plots," <i>SPWLA 22nd Annual Logging Symposium</i> , June 23-26, 1981.
	C16	Chapin <i>et al.</i> , "Advances in deep-penetration density logging," <i>Society of Petroleum Engineers</i> , SPE 59689, 2000.
	C17	Chapin and Ander, "New life for borehole gravity?" <i>The Explorer, American Association of Petroleum Geology</i> , 20:24-25, 1999.
	C18	Chapin and Ander, "Applying gravity in petroleum exploration," In: <i>American Association Petroleum Geologists Treatise of Petroleum Geology Handbook, Exploring for Oil and Gas Traps</i> , ed. E.A. Beaumont and N.H. Foster, Chapter 15, 1999.
	C19	EDCON Borehole gravity meter brochure #1.
	C20	EDCON Borehole gravity meter brochure #2.
	C21	EDCON Borehole gravity meter brochure #3.
	C22	EDCON Borehole Gravity Density Logging Report.
	C23	EDCON, Inc., Proposal for the development of a guide to borehole gravity use in salt dome oil and gas investigations, July 15, 1994.
	C24	Folle and Rolfs, "Gravimeter yields rock density for cavern during operations," <i>Oil & Gas J.</i> , Jan 22, 1996.
	C25	Gas Research Institute, "New borehole tool provides more accurate downhole density determination for thin beds," <i>GRI Technology Focus</i> .
	C26	Gas Research Institute, Tech Profile, "More accurate borehole gravity tool for thin beds."
	C27	Gournay and Lyle, "Determination of hydrocarbon saturation and porosity using a combination borehole gravimeter (BHGM) and deep investigating electric log," <i>Society of Professional Well Log Analysts, 25th Annual Logging Symposium</i> , 1-13, June 10-13, 1984.
	C28	Gournay and Maute, "Detection of bypassed gas using borehole gravimeter and pulsed neutron capture logs," <i>The Log Analyst</i> , May-June, 27-32, 1982.

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	C29	Hare <i>et al.</i> , "The 4-D microgravity method for waterflood surveillance: a model study for the Prudhoe Bay reservoir, Alaska," <i>Geophysics</i> , 64(1):78-87, 1999.
	C30	Hearst <i>et al.</i> , "Potential uses for a high-temperature borehole gravimeter," <i>Lawrence Livermore Laboratory</i> , UCRL-52421, March 8, 1978.
	C31	Herring, "Introduction to borehole gravity," <i>EDCON report</i> , February, 1990.
	C32	Jageler, "Improved hydrocarbon reservoir evaluation through use of borehole gravimeter data," <i>Society of Petroleum Engineers of AIME</i> , SPE 5511, 1975.
	C33	Labo, "A practical introduction to borehole geophysics," <i>Society of Exploration of Geophysicists, Geophysical Reference Series No. 2</i> , Chapter 9, 1987.
	C34	LaCoste & Romberg Flier, Borehole Gravity Logging Services, Bypassed Pay Opportunities.
	C35	LaCoste & Romberg Flier, Borehole Gravity Logging Services, Deep Penetration Density Data Quality.
	C36	LaCoste & Romberg Flier, Borehole Gravity Logging Services, How Deep Penetration Density Logging is Valuable at Today's Low Oil Prices.
	C37	LaCoste & Romberg Flier, Borehole Gravity Logging Services, How Deep Penetration Density Logging Works.
	C38	LaCoste & Romberg Flier, Borehole Gravity Logging Services, Production Monitoring.
	C39	LaCoste & Romberg Flier, Borehole Gravity Logging Services, Selected Annotated Bibliography.
	C40	LaCoste & Romberg Flier, Borehole Gravity Logging Services.
	C41	LaFehr, "Rock density from borehole gravity surveys," <i>Geophysics</i> , 48(30):341-356, 1983.
	C42	Li and Chouteau, "On density derived from borehole gravity," <i>The Log Analyst</i> , 40(1):33-37, 1999.
	C43	MacQueen, "Inversion of borehole gravimeter data," <i>Borehole Geophysics 3: Hardware and Methods</i> , 57-58.
	C44	McCalpin, "Operational and technical results of a multiwell borehole gravity survey," <i>Unconventional Methods in Exploration IV</i> , 313-320.

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	C45	McCullouh <i>et al.</i> , "The U.S. Geological Survey- LaCoste and Romberg precise borehole gravimeter system-instrumentation and support equipment," <i>Geological Survey Research</i> , D92-D100, 1967.
	C46	McCullouh, "Application of gravity measurements in wells to problems of reservoir evaluation," <i>SPWLA 9th Annual Logging Symposium</i> , June 23-26, 1968.
	C47	McCullouh <i>et al.</i> , "The U.S. Geological Survey-LaCoste and Romberg precise borehole gravimeter system-test results," <i>Geological Survey Research</i> , D101-D112, 1967.
	C48	Orange and Howe, "Borehole gravity meter applications to natural gas exploration and development," <i>Emerald Exploration Consultants</i> , 1987.
	C49	Popta and Adams, "Gravity gains momentum," <i>Middle East Well Evaluation Review</i> , November 12, 1992.
	C50	Popta <i>et al.</i> , "Use of borehole gravimetry for reservoir characterisation and fluid saturation monitoring," <i>Society of Petroleum Engineers</i> , SPE 20896, 151-157, 1990.
	C51	Rasmussen, "Borehole gravity survey planning and operations," <i>SPWLA 14th Annual Logging Symposium</i> , May 6-9, 1973.
	C52	Rasmussen, "The successful use of the borehole gravity meter in Northern Michigan," <i>The Log Analyst</i> , 3-10, 1975.
	C53	Robbins, "Bibliography with abridged abstracts of subsurface gravimetry (especially borehole) and corresponding in-situ rock density determinations," <i>Open-file Report</i> , 80-710, 1980.
	C54	Schultz, "Monitoring fluid movement with the borehole gravity meter," <i>Geophysics</i> , 54(10):1267-1273, 1989.
	C55	Shell Oil, "Borehole gravimetry: a single-well deep-reading method for reservoir management," December 1995.
	C56	Smith, "The case for gravity data from boreholes," <i>Geophysics</i> , 15(4):605-636, 1950.
	C57	Valliant, "Gravity meter calibration at LaCoste and Romberg," <i>Geophysics</i> , 56(5):705-711, 1991.

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